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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | |
|------------------------|-------------|----------------------|---------------------|-------------------------|--------------|
| 10/627,323 | 07/24/2003 | Yu Chen | 38482-8011US | 2288 | |
| 25096 | 7590 | 03/30/2005 | EXAMINER | | |
| PERKINS COIE LLP | | | | KANG, JULIANA K | |
| PATENT-SEA | | | | ART UNIT | |
| P.O. BOX 1247 | | | | 2874 | PAPER NUMBER |
| SEATTLE, WA 98111-1247 | | | | DATE MAILED: 03/30/2005 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/627,323 | CHEN, YU | |
| | Examiner | Art Unit | |
| | Juliana K. Kang | 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 December 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

1. Applicant's communication filed on 12/28/04 has been carefully studied by the Examiner. The arguments advanced therein are persuasive and the rejections based upon prior art made of record in the previous office action are withdrawn. In view of further search, however, and the consequent discovery of a previously uncited prior art document, a new rejection is applied to the pending claims. The late discovery of the newly applied reference is sincerely regretted. This action is not made final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4, 6-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata (U.S. Patent 6,072,925, previously cited) and further in view of Takabayashi et al (U.S. Patent 6,522,809 B1).

Regarding claims 1-3, 7-9 and 12-14, Sakata teach an apparatus comprising: an input waveguide (101) for carrying an optical signal having a nominal wavelength; and an output waveguide (102) having a Bragg grating (107) disposed proximate to said input waveguide wherein the Bragg grating is tunable (see column 2 lines 17-22) to perform optical coupling between the waveguides at an arbitrarily tuned wavelength. However, Sakata do not teach that the Bragg grating is compensated for a Bragg wavelength shift. Takabayashi et al teach tuning a Bragg wavelength using

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temperature (see column 6 line 14) and strain (see column 5 line 15) to a desired value thereby compensating for the shift in the Bragg grating wavelength (see column 18 line 62 to column 19 line 6). Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply tuning the Bragg grating to compensate the shift in the Bragg wavelength in Sakata as taught by Takabayashi et al for optimum coupling efficiency.

Regarding claims 4 and 10, Sakata and Takabayashi et al teach the claimed invention except the Bragg grating that has a higher periodicity in its middle portion than in its outer portions and a variable grating period. Since Sakata and Takabayashi et al's Bragg gratings are tunable by changing periodicity of the grating, it appears that Sakata and Takabayashi et al's device can perform the claimed limitation. . It is also noted that applicant didn't provide the criticality of having such periodicity.

Regarding claim 6, Takabayashi et al show the Bragg grating with a variable grating period.

4. Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakata (U.S. Patent 6,072,925) and Takabayashi et al (U.S. Patent 6,522,809 B1) and further in view of Kewitsch et al (U.S. Patent 6,578,388 B1).

As described above, Sakata and Takabayashi et al teach the claimed invention except an apodized Bragg grating. Kewitsch et al teach using an apodized grating improves spectral characteristics. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an apodized Bragg

grating in Sakata and Takabayashi et al as taught by Kewitsch et al to improve the spectral characteristics.

Response to Arguments

5. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Thur. 10:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JULIANA KANG
PRIMARY EXAMINER

Julian Kang 3/28/05